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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANTS:	Eberler et al.	CONFIRMATION NO. 3538
SERIAL NO.:	10/726,251	GROUP ART UNIT: 3671
FILED:	December 2, 2003	EXAMINER: Tara L. Mayo
TITLE:	METHOD AND DEVICE FOR INSTALLING AND REMOVING A STRUCTURAL COMPONENT OF AN MR APPARATUS	

MAIL STOP APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPELLANTS' APPEAL BRIEF

S I R:

In accordance with the provisions of 37 C.F.R. §41.37, Appellants herewith submit their main brief in support of the appeal of the above-referenced application.

REAL PARTY IN INTEREST:

The real party in interest is Siemens Aktiengesellschaft, a German corporation, assignee of the present application.

RELATED APPEALS AND INTERFERENCES:

There are no related appeals and no related interferences.

STATUS OF CLAIMS:

Claims 1-5, 7-9, 12 and 13 are the subject of the present appeal. All of those claims currently stand rejected. Claims 6, 10 and 11 were cancelled during prosecution before the Examiner. The application does not, and did not, contain any claims other than those noted above.

STATUS OF AMENDMENTS:

No Amendment was filed subsequent to the Final Rejection dated January 11, 2006.

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SUMMARY OF CLAIMED SUBJECT MATTER:

The subject of claims 1-11 on appeal is a device to install and remove a structural component in and from a medical large device with the aid of a two-part guide system. The first part can be attached to a height-adjustable patient bed of the large device. The other part can be attached to the structural component. One of the two parts has a first guide rail or track and the other has a guide channel. Given placement of the structural component on the patient bed, the guide rail and the guide channel cooperate such that the structural component can be moved only along the guide rail. An attachment of the guide rail, for example to the patient bed, enables the structural component (that is provided with the guide channel) to move along the guide rail almost without effort. The placement of the structural component on the patient bed can ensue with the patient bed in a lowered state. The raising of the structural component is subsequently possible with the aid of the patient bed, such that, for the most part, a service technician can effect the installation and removal. The guide rail can be separable for purposes of transport. The guide channel also can be separated at the structural component into a number of subsections, without limiting its function. Claim 13 on appeal claims a magnetic resonance apparatus having such a device. (p.2, l.4-19)

Claim 12 on appeal is a method to install and remove a structural component in a medical large device. For this, a first part of a guide system is positioned on a height-adjustable patient positioning device of the medical large device. In the installation event, the structural component with a second part of the guide system is subsequently placed on the first part of the guide system. Both parts of the guide system effect a guided displaceability of the structural component. The structural

component is subsequently raised with the aid of the patient positioning device until the structural component is located at the installation height. The structural component is subsequently slid (pushed) along the guide rail into the medical large device. Given the removal event of the structural component, after the positioning of the first part of the guide system at the height-adjustable patient positioning device, this is raised to the removal height. The structural component with the second part of the guide system is slid out of the medical large device and lowered with the aid of the patient positioning device. The structural component is subsequently removed from the first part of the guide system. This method has the advantage that is significantly simplifies the installation and removal, and for the most part can be implemented by only a single service technician. Under the circumstances, only for the placement of the structural component on, or for the removal of the structural component from, the lowered patient positioning device does the service technician still require help. The service technician alone can implement the raising, lowering, as well as the sliding in and out, with the aid of the invention. (p.2, l.20 - p.3, l.16)

FIG 1 shows the mode of operation of the installation and removal device, as well as the process of the method in the example of the installation of a radio-frequency body coil. 1 in a magnetic resonance tomography device 3. (p.5, l. 7-9) Two rails 5 are connected with one another with two attachment elements 7 and form a rail system. (p.5, l. 9-11) The rail system is placed on the patient bed 11 and, together with the patient bed 11, is lowered to a lower setting. (p.5, l. 11-12) The radio-frequency body coil 1 is subsequently placed on the rail system, whereby bearing supports 13a, 13b, 13c, 13d attached to the radio-frequency body coil with fins come to lie on the rails 5. (p.5, l. 12-14) The bearing supports 13a, 13b, 13c,

13d are aligned in pairs in respective rows, meaning each pair is attached to the cylindrical radio-frequency coil 1 at an identical angle, such that their guide fins reproduce two straight guide channels in sections. (p.5, l. 14-17) Only one bearing support 13a,...13d is shown for each pair. (p.5, l.17-18) The guide fins operate as a guide channel and prevent a rotational movement around the cylinder axis. (p.5, l. 18-19) Both rails 5 of the rail system are adapted to one another with regard to their relative positions and to the angular positions of the guide fins of the supports 13a, 13b, 13c, 13d with regard to their radial alignment. (p.5, l. 19-22)

In the likewise cylindrical gradient coil 15 that forms the gradient system of the magnetic resonance tomography device 3, two further plastic rails 17 are glued in place at the same angle and thus form an extension of the rails 5 within the gradient coil 15. The patient bed 11 is now raised far enough that the rails 5 are at a height with the plastic rails 17 of the gradient coil 15. In this position, the radio-frequency body coil 1 can easily be slid into the gradient coil 15 of the magnetic resonance spectroscopy device 3. (p.5, l.20, p.6, l.4)

FIG 2 shows a side view of a guide rail 5. At both ends, the guide rail 5 comprises notches that, in the assembly of the rail system, fit into notches of the attachment elements 7. (P.6, l. 5-7)

FIG 3 shows the substantial features of a device 19 for installation and removal of a structural component 21. The attachment element 7 is adapted to the shape of the structural component 21, in this case a cylindrical shape. (p.6, l.8-10) The rails 5 (which, as noted, have matching notches at the ends) are inserted into two notches of the attachment element 7. (p.6, l.10-12) Bearing supports 23 (each with one guide groove) are attached to the structural component 21, such that upon

placement of the structural component 21 the bearing supports with the guide grooves come to lie on the guide rails 21. (p.6, l.12-15) The guide groove on the bearing support 23 is realized by a one-sided guide fin. (p.6, l. 15-16)

FIG 4 shows a further possibility for the guide groove in which the rail 25 is positioned in a notch of the guide groove of the bearing support 27. Given the use of such a guide system, only a guiding positioning is necessary, such that the second guide rail serves only for positioning purposes, meaning the appertaining positioning support does not compulsorily require a guide groove. (p.6, l.17-21)

A cross section through the gradient coil 15 from FIG 1 is shown in FIG 5. In the gradient coil 15, the two plastic rails 17 are attached at the same angle α at which the guide rails 5 are arranged on the attachment element 7 from FIG 2. (p.6, l.22-24) The plastic rails 17 can be glued in place, and in addition to the guiding function have the task of protecting the gradient coil 15 from the component to be installed. A further advantage of the guided insertion of the component with the aid of the guiding bearing supports is that the component to be installed is automatically correctly positioned, and can not shift laterally in the gradient coil 15. (p.6, l.24 - p.7, l.4)

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL:

The sole issue to be reviewed on appeal is whether the subject matter of claims 1-5, 7-9, 12 and 13 would have been obvious to a person of ordinary skill in the field of designing medical examination installations based on the teachings of United States Patent Application Publication No. 2002/0129446 (Heinold et al. et al.) in view of United States Patent Application Publication No. 2002/0104163 (Reimann) and United States Patent No. 4,727,328 (Carper et al.).

ARGUMENT:

Rejection of Claims 1-5, 7-9, 12 and 13 Under 35 U.S.C. §103(a) Based on Heinold et al. et al., Reimann and Carper et al.

In the Final Rejection dated January 11, 2006, the initial paragraph at page 3 summarizing the rejection under 35 U.S.C. §103(a) based on the Heinold et al. et al., Reimann and Carper et al. does not include a specific identification of claim 13. Nevertheless, in the detailed substantiation in the Final Rejection following that summary, claim 13 is included, and therefore Appellants assume the Examiner intended to include claim 13 in the summarization of the rejection, Appellants note, however, that in the details substantiation of the rejection of claim 13, only the Heinold et al. et al. and Carper et al. references were specifically cited, and there was no mention of the Reimann reference with regard to the rejection of claim 13.

With regard to claim 1, the Examiner has acknowledged in the Final Rejection that the Heinold et al. et al. reference does not disclose the patient supporting apparatus being height adjustable, nor that the guide system comprises a second guide rail mounted on the medical installation that, with appropriate positioning of the patient supporting apparatus, forms a linear aligned extension of the first guide rail.

With regard to independent claim 13, the Examiner acknowledged in the Final Rejection that the Heinold et al. et al. reference does not disclose a height adjustable patient supporting apparatus, and that the "structural component" is a radio frequency body antenna.

Appellants agree that the Heinold et al. et al. reference does not disclose these features of claims 1 and 13, but Appellants further submit that there are additional features in those independent claims that are not disclosed in the Heinold et al. et al. reference, as discussed below. Most important among these features

that Appellants submit is not disclosed in the Heinold et al. et al. reference is a "structural component" that is separate from the "patient supporting apparatus."

In the rejection based on the Heinold et al. et al reference, the Examiner stated that the panel 5 in the apparatus disclosed in that reference corresponds to the "structural component" of independent claims 1, 12 and 13. Appellants respectfully disagree with this position of the Examiner.

Each of independent claims 1, 12 and 13 already contains language explicitly requiring that the structural component be separate from the patient supporting apparatus that is set forth previously in those claims. Appellants submit that the panel 5 is not separate from the patient supporting apparatus 1 disclosed in the Heinold et al. reference, but is instead an integral, non-separable component of the overall patient supporting apparatus. This is made clear by the language in paragraph [0021] of the Heinold et al. reference, which states that Figure 1 shows a side view of a patient-supporting apparatus 1 on which a patient is supported on a panel 5. Appellants submit this language makes clear that the panel 5 is part of the patient-supporting apparatus. In the next paragraph [0022], it is stated that the panel 5 is arranged on the top framework part 10 of a bed base or table framework 9 by means of a guide element 7, for example, a guide rail. Appellants submit this language as well makes clear that the patient-supporting apparatus 1 is composed of three components, namely the panel 5, the top framework part 10, and the bed base 9. In fact, if the panel 5 were not considered to be a part of the patient-supporting apparatus, it is difficult to envision how the underlying components 9 and 10 could be considered as accomplishing the function of supporting a patient in the intended manner. The presence of the panel 5 is absolutely necessary for the overall

apparatus 1 to function as a patient-supporting apparatus, and therefore it is not a structural component that is separate from the patient-supporting apparatus, as required in independent claims 1, 12 and 13.

Each of claims 1, 12 and 13 as originally filed referred to a "patient bed," but that term at each location in all of the claims was changed during prosecution to "patient supporting apparatus." This language was used because it is the same as the language used to refer to the overall apparatus 1 in the Heinold et al. et al reference. By using the same language as in the Heinold et al. reference and then stating that the structural component in each of claims 1, 12 and 13 is separate from the patient supporting apparatus, this makes clear that the structural component cannot be any component of the patient supporting apparatus 1 disclosed in the Heinold et al. et al reference.

Moreover, the language in the Heinold et al. et al reference relied upon by the Examiner as disclosing a "first guide rail" is in the singular, i.e. it refers to only one guide rail. In the Carper et al reference, by contrast, two parallel guide rails are used. In substantiating the rejection of claim 1 (the only claim wherein this language is present) the Examiner stated is apparently considering these two parallel rails to be "an extension" of the single guide rail disclosed in the Heinold et al. et al reference. Appellants subject that the language in claim 1 requiring that the second guide rail be a linear, aligned extension of the first guide rail precludes such an interpretation. There is no suggestion or guidance in either of the Heinold et al. et al or the Carper et al references as to how some type of alignment can be achieved between a system such as Heinold et al. et al, that uses a single guide rail, and a system as disclosed in the Carper et al reference, that makes use of two parallel

guide rails. Even if the Examiner still considers the two parallel guide rails in the Carper et al reference to be "an extension" of the single guide rail disclosed in the Heinold et al. et al reference, it is clear that those two parallel guide rails cannot be a linear, aligned extension of the single guide rail disclosed in the Heinold et al. et al reference.

Appellants do not have a significant disagreement with the Examiner's statements concerning the teachings of the Reimann reference, however, for the above reasons Appellants submit that even if the Heinold et al. reference were modified in accordance with those teachings, the subject matter of independent claims 1, 12 and 13 still would not result.

The remaining claims on appeal depend from claim 1 and add further structure to the non-obvious combination of claim 1, and are patentable over the teachings of the above references for the same reasons discussed above in connection with claim 1.

CONCLUSION:

For the foregoing reasons, Appellants respectfully submit the Examiner is in error in law and in fact in rejecting claims 1-5, 7-9, 12 and 13 under 35 U.S.C. §103(a) based on Heinold et al., Reimann and Carper et al. Reversal of that rejection is therefore proper, and the same is respectfully requested.

This Appeal Brief is accompanied by a check for the requisite fee in the amount of $500.00.

Submitted by,

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CERTIFICATE OF MAILING

I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on June 9, 2006.

Steven H. Noll

STEVEN H. NOLL

CLAIMS APPENDIX

1. A device to install and remove a structural component of a medical installation, said medical installation having a height-adjustable patient supporting apparatus separate from said structural component, said device comprising:

a two-part guide system attachable to said patient supporting apparatus and to said structural component;

a first of the two parts of said guide system comprising a first guide rail and a second of said two parts of said guide system comprising a guide groove, patient supporting apparatus being adapted to receive said guide rail thereon, and said guide system comprising a second guide rail mounted on said medical installation that, with appropriate positioning of said patent supporting apparatus, forms a linear, aligned extension of said first guide rail; and

said guide system, upon temporary, detachable placement of said structural component on said guide system on said patient supporting apparatus, guiding said structural component by sliding along said guide rail relative to said medical installation.

2. A device as claimed in claim 1 wherein said guide groove is in said structural component.

3. device as claimed in claim 1 wherein said structural component has a bearing support attached thereto, and wherein said guide groove is in said bearing support.

4. A device as claimed in claim 3 wherein said bearing support is comprised of plastic.

5. A device as claimed in claim 1 wherein said guide system comprises an attachment element for attaching said guide rail to said patient supporting apparatus.

7. A device as claimed in claim 1 wherein said second guide rail is comprised of plastic.

8. A device as claimed in claim 1 wherein said medical device is a magnetic resonance tomography device.

9. A device as claimed in claim 8 wherein said structural component is a radio-frequency body antenna of said magnetic resonance tomography device.

12. A method for installing and removing a structural component of a medical device comprising the steps of:

positioning a first part of a guide system at a height-adjustable patient supporting apparatus of the medical device;

forming a second part of the guide system on a structural component, separate from said patient supporting apparatus and temporarily detachably engaging said first part of said guide system with said second part of said guide system with said structural component on said guide system on said patient supporting apparatus; and

adjusting the height of the patient supporting apparatus to selectively raise and lower the structural component therein relative to said medical device, and sliding said structural component along said first and second parts of said guide system to install or remove said component relative to said medical device.

13. A magnetic resonance tomography device comprising:

a magnetic resonance scanner having a radio-frequency body antenna and a gradient system;

a height-adjustable patient supporting apparatus, separate from said radio-frequency antenna, adapted to receive a patient thereon to move said patient into and out of said magnetic resonance scanner; and

a device for installing and removing a structural component relative to said magnetic resonance scanner, said device comprising a two-part guide system having a first part attached to said height adjustable patient supporting apparatus and a second part attached to said structural component, said first part comprising a guide rail and said second part comprising a guide groove temporarily detachably engageable with said guide rail allowing said structural component, when placed on said patient supporting apparatus, to be slid along said guide rail relative to said magnetic resonance scanner.

EVIDENCE APPENDIX

ATTACHMENT A:

Figs. 1, 2, 3, 4 and 5 - contained in application as originally filed on December 2, 2003.

ATTACHMENT B:

United States Patent Application Publication No. 2002/0129446 (Heinold et al.) - cited in Final Rejection dated January 11, 2006

ATTACHMENT C:

United States Patent Application Publication No. 2002/01463 (Reimann) - cited in Final Rejection dated January 11, 2006.

ATTACHMENT D:

United States Patent No. 4,727,328 (Carper et al.) - cited in Final Rejection dated January 11, 2006.

RELATED PROCEEDINGS APPENDIX

None.

CH2\ 627615.2

FIG 1

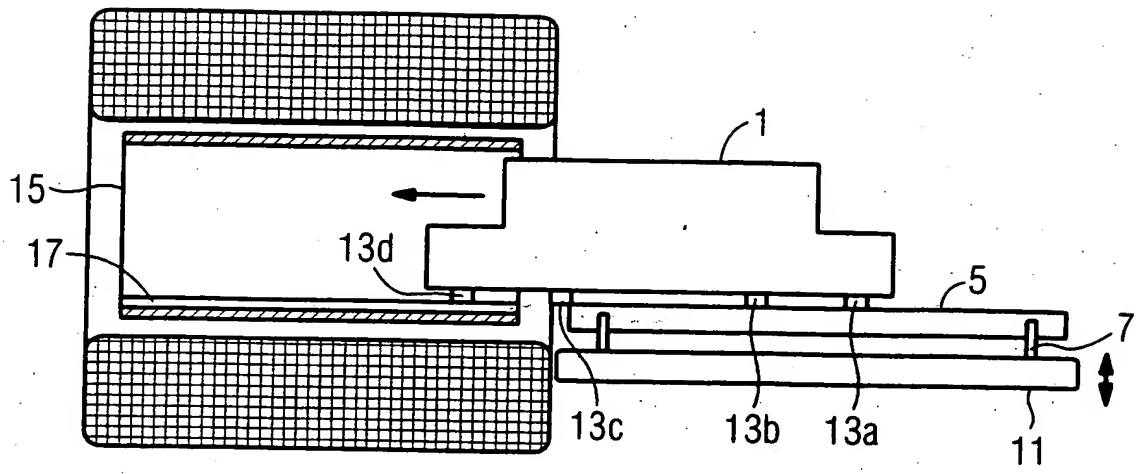

FIG 2

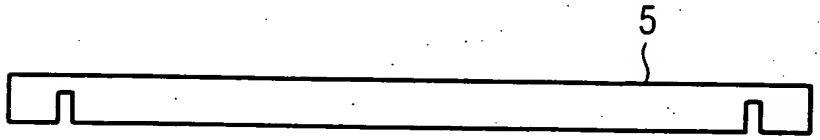

FIG 3

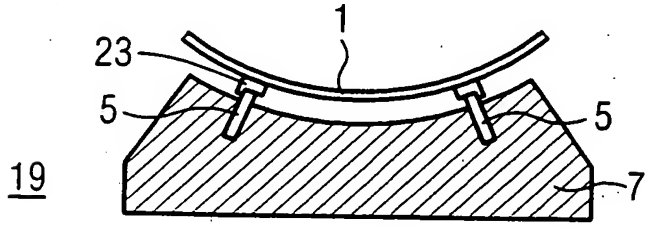

FIG 4

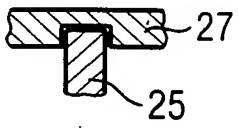

FIG 5